

# Surgical Case Study Distal Fibula Fracture



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## **Case Report**

The patient is a 58 year old active, healthy female who was involved in an ATV accident suffering a right distal fibula fracture (Fig.1). She was initially seen at a local ER where she was splinted and discharged. She presented to the office one week after the injury where stress radiography demonstrated an unstable ankle fracture pattern (Fig.2). Treatment options were presented to the patient, and she decided to proceed with surgery.

Figure 1: AP, Lat and Obl x-rays of the right ankle demonstrated a mildly displaced distal fibula fracture. The Mortise was anatomically aligned.

Figure 2: Stress X-rays demonstrated lateral shift of the talus and medial joint space widening.

# **Surgical Technique Overview**

Figure 3: The patient was placed in the supine position with the right leg elevated and a bump under the ipsilateral buttock. The fibula was drawn out with a marking pen and a small incision was made over the fracture.

Figure 4: The fracture was reduced and a guidewire placed medial to the tip of the distal fibula, then advanced once the appropriate position was determined.

Figure 5: The opening reamer was used, followed by a 3.2 mm cannulated drill.



Figure 1 Figure 2



Figure 3



Figure 4



Figure 5



#### **Surgical Technique Overview** continued

Figure 6: A 130 mm x 3.5 mm Flex-Thread was then placed and initially stabilized with a 1.6 mm K-wire.

Figure 7: Distal locking screws were then placed through the guide.

Figure 8: Two Conventus Flower Constrictor® syndesmosis rope implants were then placed.

## **Postoperative Protocol**

The patient started partial weight bearing on the operative limb at two weeks post-op with a CAM boot, and was full weight bearing by six weeks. At that point she was transitioned to a stirrup ankle brace and weaned of it after 10 weeks post-op.

## **Follow-up Outcome**

Figure 9: The patient had minor aches and pains postoperatively, and she was able to return to low impact activities by eight weeks after surgery. At four months after surgery the patient was able to return to her regular activities. Six month follow up X-rays are seen in Figure 9.

## **Summary**

This case demonstrates the advantages of the Flex-Thread Distal Fibula Nail System, including: smaller incisions to reduce the chances of postoperative wound complications; intramedullary fixation to allow for early weightbearing; flexible nail design to allow for ease of insertion and fit with multiple fibula sizes; and secure fixation provided proximally with multiple threads and distally with locking cortical screws.





Figure 6





Figure 7

Figure 8







Figure 9



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